

SYSTEM AND METHOD FOR RANGE CHECK ELIMINATION VIA ITERATION SPLITTING IN A DYNAMIC COMPILER

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ABSTRACT OF THE DISCLOSURE

A range check elimination loop structure is provided. The range check elimination loop structure includes a pre-loop structure based on an original loop structure, where the pre-loop structure is capable of testing indexing expressions for underflow. In addition, a main loop structure having indexing expressions based on the original loop structure is included. The indexing expressions included in the main loop preferably cannot produce an underflow or an overflow. Also included in the range check elimination loop structure is a post-loop structure based on the original loop structure that is capable of testing indexing expressions for overflow.